



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/935,952	08/23/2001	Masaki Fujii	DB000670-000	1567

7590 10/30/2003
Robert A. Koons, Jr. Esq.
Buchanan Ingersoll P.C.
Eleven Penn Center
1835 Market Street, 14th Flr.
Philadelphia, PA 19103-2985

EXAMINER

YOON, TAE H

ART UNIT PAPER NUMBER

1714

DATE MAILED: 10/30/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/935,952

Applicant(s)

FUJII ET AL.

Examiner

Tae H Yoon

Art Unit

1714

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-60 is/are pending in the application.
- 4a) Of the above claim(s) 22-34 and 52-60 is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1-21 and 35-51 is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on ____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on ____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. ____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892) 4) ☐ Interview Summary (PTO-413) Paper No(s). ____.
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948) 5) ☐ Notice of Informal Patent Application (PTO-152)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) ____ 6) ☐ Other: ____.

Election/Restrictions

Restriction to one of the following inventions is required under 35 U.S.C. 121:

- I. Claims 1-21 and 35-51, drawn to a synthetic hydrotalcite and a blend with a polyolefin thereof, classified in class 524, subclass 437+.
- II. Claims 22-34, drawn to a method of making a synthetic hydrotalcite, classified in class 556, subclass 1+.
- III. Claims 52-60, drawn to a method of making a synthetic hydrotalcite-polyolefin blend, classified in class 524, subclass 800+.

The inventions are distinct, each from the other because of the following reasons:

Inventions II (and III) and I are related as process of making and product made.

The inventions are distinct if either or both of the following can be shown: (1) that the process as claimed can be used to make other and materially different product or (2) that the product as claimed can be made by another and materially different process (MPEP § 806.05(f)). In the instant case the blend can be made with a melt extrusion of polyolefin a synthetic hydrotalcite and said synthetic hydrotalcite can be made by first reacting a trivalent cation source and a divalent cation source, and then reacting with an organic anionic source.

Because these inventions are distinct for the reasons given above and have acquired a separate status in the art as shown by their different classification, and the search required for Group II and III is not required for Group I, restriction for examination purposes as indicated is proper.

During a telephone conversation with Mr. McWilliams on October 24, 2003 a provisional election was made without traverse to prosecute the invention of Group I, claims 1-21 and 35-51. Affirmation of this election must be made by applicant in replying to this Office action. Claims 22-34 and 52-60 are withdrawn from further consideration by the examiner, 37 CFR 1.142(b), as being drawn to a non-elected invention.

Applicant is reminded that upon the cancellation of claims to a non-elected invention, the inventorship must be amended in compliance with 37 CFR 1.48(b) if one or more of the currently named inventors is no longer an inventor of at least one claim remaining in the application. Any amendment of inventorship must be accompanied by a request under 37 CFR 1.48(b) and by the fee required under 37 CFR 1.17(i).

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claims 1-21 and 35-51 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

The recited formula is indefinite absent definitions or values for x and n. Improper Markush language is recited in claims 1, 15, 20, 21, 35, 50 and 51, and a proper format is "—is selected from the group consisting of A, B, ----- and Z" as used by applicant in claim 38. Claims 45 and 46 are confusing since polystyrene, and

Art Unit: 1714

polyvinylchloride do not belong to the polyolefin $((CH_2)_n)$ and clarification is needed.

Insertion of said polystyrene and polyvinylchloride in claim 35 is suggested.

Insertion of “,” after “aromatic acids” in line 6 of claim 1 is needed.

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1-3 are rejected under 35 U.S.C. 102(b) as anticipated by Drezdon (US 4,774,212).

Drezdon teaches the instant hydrotalcite in claim 1. Thus, the instant invention lacks novelty.

Claims 1-3, 8 and 10 are rejected under 35 U.S.C. 102(b) as anticipated by Carlino (Solid State Ionics 98 (1997) 73-84).

Carlino teaches the instant hydrotalcite in tables 1 and 2. Thus, the instant invention lacks novelty.

Claims 1-3 and 6 are rejected under 35 U.S.C. 102(b) as anticipated by Borja et al (J. Phys. Chem. 1992, 96, 5434-5444).

Borja et al teach the instant hydrotalcite in abstract. Thus, the instant invention lacks novelty.

Claims 1-4, 15, 20 and 21 are rejected under 35 U.S.C. 102(b) as anticipated by or, in the alternative, under 35 U.S.C. 103(a) as obvious over Schutz et al (US 5,399,329).

Schutz et al teach the instant hydrotalcite in abstract. The organic anion source is taught as a carboxylic acid having up to 6 carbon atoms at col. 4, lines 1-2, and the use of mixed anions is taught at col. 2, lines 22-25. The recited "up to 50%" of claims 20 and 21 encompasses 0%. Thus, the instant invention lacks novelty.

Claims 1-8, 10, 11, 13, 15, 20 and 21 are rejected under 35 U.S.C. 102(b) as anticipated by Martin et al (US 5,728,366).

Martin et al teach the instant hydrotalcite at col. 3, line 64 to col. 4, line 15 and col. 6, lines 19-56. Thus, the instant invention lacks novelty.

Claims 1-13, 15, 20 and 21 are rejected under 35 U.S.C. 103(a) as obvious over Martin et al (US 5,728,366).

The instant invention further recites chlorobenzoate and acrylate over Martin et al. However, Martin et al teach benzoate and halogen (or chlorine) substitution and methacrylate at col. 6, lines 40, 46 and 52.

It would have been obvious to one skilled in the art at the time of invention to utilize a chlorobenzoate or an acrylate in Martin et al since Martin et al teach halogen (or chlorine) substituted carboxylic anions and since said acrylate is the art well known carboxylic anion and since Martin et al teach its derivative, methacrylate.

Claims 1-13 and 15-21 are rejected under 35 U.S.C. 103(a) as obvious over Martin et al (US 5,728,366).

The instant invention further recites the use of a mixture of anions over Martin et al. However, Martin et al teach employing a mixture of anions at col. 4, lines 43-54.

It would have been obvious to one skilled in the art at the time of invention to utilize a mixture of anions over Martin et al since Martin et al teach employing a mixture of anions absent showing otherwise.

Claims 1-3, 8, 35-38, 44 and 47-51 are rejected under 35 U.S.C. 102(b) as anticipated by Bonora (US 5,977,218).

Bonora teaches the instant hydrotalcite at col. 4, lines 34-46 wherein a benzoate as an anion is seen. Blends comprising polyolefin are taught at col. 3, lines 9-20. Thus, the instant invention lacks novelty.

Claims 1-13, 15-21, 35-44 and 47-51 are rejected under 35 U.S.C. 103(a) as obvious over Bonora (US 5,977,218) and Martin et al (US 5,728,366).

The instant invention further recites the use of other hydrotalcites and a mixture of anions over Bonora. However, Martin et al teach the instant hydrotalcites and modification thereof.

It would have been obvious to one skilled in the art at the time of invention to utilize a hydrotalcite of Martin et al in Bonora or to utilize a polyolefin of Bonora in Martin et al since Bonora teaches various hydrotalcites and since the instant hydrotalcites and derivatives thereof are well known as taught by Martin et al and since the use of hydrotalcites in a polyolefin composition is well known as taught by Bonora absent showing otherwise.

Claims 1-3, 8, 35-38 and 44-51 are rejected under 35 U.S.C. 103(a) as obvious over Bonora (US 5,977,218) and Nosu et al (US 6,313,208).

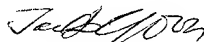
The instant invention further recites polystyrene and polyvinyl chloride over Bonora. However, the use of hydrotalcites in such polymers is well known as taught by Nosu et al, abstract and col. 6, lines 56-67.

It would have been obvious to one skilled in the art at the time of invention to utilize polystyrene and polyvinyl chloride of Nosu et al in Bonora or to utilize a hydrotalcite of Bonora in Nosu et al since the use of hydrotalcites in various polymeric compositions is well known as taught by Nosu et al and since the use of the instant hydrotalcites in various polymeric compositions including polyolefins is well known as taught by Bonora absent showing otherwise.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Tae H Yoon whose telephone number is (703) 308-2389. The examiner can normally be reached on Mon-Thu.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Vasu Jagannathan can be reached on (703) 306-2777. The fax phone number for the organization where this application or proceeding is assigned is (703) 872-9306.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-0661.


Tae H Yoon
Primary Examiner
Art Unit 1714

THY/October 27, 2003